

IN THE CLAIMS

1. (Currently Amended) A method for reducing image noise in a scanned image, wherein ~~the image is composed of a plurality of pixels having a scale of bits, comprising the steps:~~

decreasing a color level of the scanned image by reducing a plurality of a number of bits of the scale a full color level of each pixel one or more pixels in the scanned image to form a reduced color level image;

composing a pattern having less color level than the full color level; and

recombining the scale full color level of each pixel the one or more pixels in the scanned image by combining the reduced color level image with the pattern.

2. (Currently Amended) The method for reducing image noise of claim 1, wherein the reduced color level image and the pattern are combined using a bit enhanced method ~~after the step of recombining the scale of each pixel in the image, further comprising a step:~~

~~filling out missing codes of each pixel of the image.~~

3. (Currently Amended) The method for reducing image noise of claim 1, wherein combining the reduced color level image with the pattern restores the one or more pixels to include a same number of bits as before the color level is decreased ~~the step of reducing a plurality of bits of the scale of each pixel in the image can reduce the scale of each pixel in the image.~~

4. (Currently Amended) The method for reducing image noise of claim 1, wherein the pattern ~~the step of recombining the scale of each pixel in the image~~ comprises a halftone pattern ~~method~~.

5. (Currently Amended) The method for reducing image noise of claim ~~[[4]]~~ 1, wherein the number of bits reduced from the full color level is set to an image noise level ~~a pattern composed by the halftone pattern method is a matrix pattern~~.

6. (Currently Amended) ~~The~~ A method for reducing image noise ~~of claim 5~~, wherein the image is composed of a plurality of pixels having a scale of bits, comprising the steps:
reducing a plurality of bits of the scale of each pixel in the image; and
recombining the scale of each pixel in the image, wherein the step of recombining the scale of each pixel in the image comprises a halftone pattern method, wherein a pattern composed by the halftone pattern method is a matrix pattern, and wherein the row and column numbers of the matrix pattern are dependent on the number of bits reduced in the step of reducing a plurality of bits of the scale of each pixel in the image.

7. (Currently Amended) The method for reducing image noise of claim ~~[[2]]~~ 1, wherein the color level of the pattern depends on the number of bits reduced from the full color level ~~the step of filling out missing codes of the pixels of the image comprises a bit enhance method~~.

8. (Currently Amended) A method for reducing ~~image noise in an image~~, wherein the image is composed of a plurality of pixels having a scale of bits, comprising the steps:

~~reducing a plurality of bits of the scale~~ a full image level of each pixel one or more pixels in the image by decreasing a number of bits according to the image noise;

composing a halftone pattern with a reduced image level corresponding to the decreased number of bits; and

recombining the scale-image level of each pixel the one or more pixels in the image using the halftone pattern; and

~~filling out missing codes of each pixel of the image.~~

9. (Currently Amended) The method for reducing ~~image~~ noise of claim 8, wherein a number of bits in the recombined image level is the same as a number of bits in the full image level ~~the step of reducing a plurality of bits of the scale of each pixel in the image can reduce the scale of each pixel in the image.~~

10. (Currently Amended) The method for reducing ~~image~~ noise of claim 8, wherein ~~the step of recombining the scale of each pixel in the image comprises a halftone pattern method~~ comprises a matrix having a number of rows equal to the decreased number of bits.

11. (Currently Amended) The method for reducing ~~image~~ noise of claim 10, wherein the matrix further has a number of columns equal to the decreased number of bits ~~a pattern composed by the halftone pattern method is a matrix pattern.~~

12. (Currently Amended) The method for reducing ~~image~~ noise of claim 8 further comprising displaying the image including the recombined image level on a computer monitor

~~11, wherein the row and column numbers of the matrix pattern are dependent on the number of bits reduced in the step of reducing a plurality of bits of the scale of each pixel in the image.~~

13. (Currently Amended) The method for reducing ~~image~~ noise of claim 8, ~~wherein the step of further comprising~~ filling out missing codes of the one or more pixels of the image ~~comprises using~~ a bit enhance method.

14. (New) An apparatus, comprising:

a scanner configured to scan an image at a scanned image level; and

a processor, the processor configured to:

reduce at least one bit of image level of one or more pixels of the scanned image to include a reduced image level;

compose a pattern including a low image level; and

recombine the scanned image including the reduced image level with the pattern including the low image level such that the recombined scanned image includes a same image level as the scanned image.

15. (New) The apparatus of claim 14, wherein a same image level comprises a same number of bits as the scanned image before the at least one bit is reduced.

16. (New) The apparatus of claim 14 wherein the processor is further configured to use a halftone pattern method to recombine the scale of each pixel in the image.

17. (New) The apparatus of claim 14 wherein the number of bits reduced from the full color level is set to an image noise level.

18. (New) An apparatus comprising:

means for reducing a full image level of one or more pixels in the image by decreasing a number of bits according to the image noise;

means for composing a halftone pattern with a reduced image level corresponding to the decreased number of bits; and

means for recombining the image level of the one or more pixels in the image using the halftone pattern.

19. (New) The apparatus of claim 18 wherein a number of bits in the recombined image level is the same as a number of bits in the full image level.

20. (New) The apparatus of claim 18 wherein the halftone pattern comprises a matrix having a number of rows and columns equal to the decreased number of bits.